

**THIS OPINION WAS NOT WRITTEN FOR PUBLICATION**

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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***Ex parte*** SATOSHI ODAGAWA

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Appeal No. 96-2418  
Application 08/137,267<sup>1</sup>

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ON BRIEF

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Before JERRY SMITH, FLEMING and TORCZON, ***Administrative Patent Judges.***

FLEMING, ***Administrative Patent Judge.***

***DECISION ON APPEAL***

This is a decision on appeal from the final rejection of  
claims 1 through 10, all of the claims present in the

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<sup>1</sup>Application for patent filed October 18, 1993.

application.

The invention relates to a method and apparatus for correcting a distance error of a navigation apparatus which corrects the shift between a measured present position and an actual position on a road on which the movable body is travelling, so as to improve the accuracy of the present position on an electronic map.

The independent claim 1 is reproduced as follows:

1. A method of correcting a distance error of a navigation apparatus for displaying at least a present position and an advance direction of a movable body on map information including road position information, said apparatus including a measuring means for detecting a travelling distance and the advance direction and periodically measuring an advanced position, to which the movable body is assumed to have advanced from the present position, to update the present position by the advanced position,

said method comprising the steps of:

setting the present position as a first present position candidacy;

positioning a plurality of second present position candidacies on positions corresponding to the road forward and backward of the first present position candidacy;

measuring the advanced position with respect to each of the first and second present position candidacies as a standard position, on the basis of the detected travelling distance and advance direction;

calculating a correction amount of each measured advanced position, to correct each measured advanced position onto a position corresponding to the road according to the road

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position information;

selecting one of the first and second present position candidacies, which calculated correction amount is the minimum; and

updating the present position by the corrected advanced position of the selected one candidacy.

The Examiner relies on the following references:

Thoone et al. (Thoone)	4,758,959	Jul. 19, 1988
Honey et al. (Honey)	4,796,191	Jan. 3, 1989
Tenmoku et al. (Tenmoku)	4,807,127	Feb. 21, 1989

Claims 1 and 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Honey. Claims 2, 3 and 8 stand rejected under 35 U.S.C. § 103 as being unpatentable over Honey and Tenmoku. Claims 4 through 7 and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Honey and Thoone.

Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the briefs<sup>2</sup> and answer for the respective details thereof.

#### OPINION

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<sup>2</sup>Appellant filed an appeal brief on September 29, 1995. We will refer to this appeal brief as simply the brief. Appellant filed a reply appeal brief on April 4, 1996. We will refer to this reply appeal brief as the reply brief. The Examiner stated in the Examiner's letter dated April 26, 1996 that the reply brief has been entered and considered but no further response by the Examiner is deemed necessary.

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We will not sustain the rejection of claims 1 through 10 under 35 U.S.C. § 103.

The Examiner has failed to set forth a ***prima facie*** case. It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express teachings or suggestions found in the prior art, or by implications contained in such teachings or suggestions. ***In re Sernaker***, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." ***Para-Ordnance Mfg. v. SGS Importers Int'l, Inc.***, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), ***cert denied***, 117 S.Ct. 80 (1996) ***citing W. L. Gore***, 721 F.2d 1540, 1548, 220 USPQ 303, 309.

The Examiner rejects Appellant's only two independent claims, claims 1 and 9, under 35 U.S.C. § 103 as being unpatentable over Honey. The Examiner reasons that because Honey teaches the use of dead reckoned positioning (DRP) and contour of equal probability (CEP), those skilled in the art would have been motivated to use travel points along the road segment as data for correcting navigational vehicle position by selecting minimum

error distance or least mean square criteria to reduce computation complexity to obtain Appellant's invention as recited in Appellant's claims 1 and 9.

Appellant argues on pages 12 and 13 of the brief that the Honey system determines which segments intersect the CEP and determines whether there exists a segment intersecting the CEP that corresponds to the initial position  $DRP_0$ .

Appellant's invention as recited in the independent claims sets second position candidacies forward and backward of the present position candidacy on the road in which the vehicle is currently travelling. Appellant argues that this is not taught or suggested by Honey. Similarly, Appellant argues that Honey does not teach or suggest any controlling means for setting the first present and second present position candidacies on positions corresponding to the road forward and backward of the first present position candidacy as recited in Appellant's claim 9.

Upon a closer inspection, we find that Honey teaches in column 3, line 44, through column 4, line 25, a method for providing information to improve the accuracy of tracking a vehicle comprising the step of deriving any of a plurality of parameters to determine if a more probable current position

exists. In column 18, lines 15-51, Honey discloses that Figure 8 is a flow chart illustrating the overall vehicle navigational algorithm. In block 8C, a multi-parameter evaluation is performed by computer 12 to determine if a segment S in the navigation neighborhood contains a point which is more likely than the current dead reckoned position  $DRP_c$ . In column 20, lines 23-60, Honey discloses that Figure 14 shows the flow chart of the subroutine for determining the most probable line segment S. First, the X,Y coordinate data of a line segment S are fetched by computer 12 from the navigation neighborhood of the map. Then, the computer 12 determines if this line segment S is parallel to the heading H of the vehicle within a threshold. If the segment S is parallel, then the computer 12 determines if this line segment S intersects the contour of equal probability, CEP. However, Honey does not teach setting second position candidacies forward and backward of the present position candidacy on the road in which the vehicle is currently travelling.

In addition, Appellant argues on page 2 of the reply brief that the mere assertion by the Examiner that use of contours of equal probability would have provided the motivation for those

skilled in the art to obtain Appellant's invention does not establish a suggestion to make such a modification. Appellant argues that one of ordinary skill in the art would have no motivation or incentive to make the Examiner's proposed modification.

The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), **citing *In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). "Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor." ***Para-Ordnance Mfg.***, 73 F.3d at 1087, 37 USPQ2d at 1239, **citing *W. L. Gore***, 721 F.2d at 1551, 1553, 220 USPQ at 311, 312-13 (Fed. Cir. 1983), ***cert. denied***, 469 U.S. 851 (1984). Upon reviewing Honey, we fail to find any suggested desirability of modifying Honey to obtain Appellant's invention as recited in Appellant's claims 1 and 9.

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We note that the remaining claims depend from either claim 1 or claim 9. The above rationale thereby applies to these claims as well.

We have not sustained the rejection of claims 1 through 10 under 35 U.S.C. § 103. Accordingly, the Examiner's decision is reversed.

***REVERSED***

JERRY SMITH	)	
Administrative Patent Judge	)	
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	)	BOARD OF PATENT
MICHAEL R. FLEMING	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
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	)	
RICHARD TORCZON	)	
Administrative Patent Judge	)	

Young & Thompson  
Ste. 200  
745 S. 23rd Street  
Arlington, VA 22202